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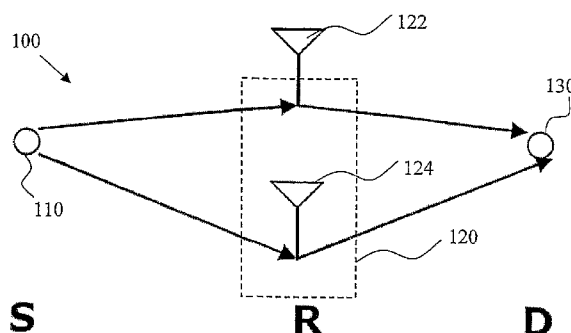


Figure 1

(57) Abstract: Methods and systems are proposed for transmitting data from a source (110) to a destination (130) via a relay station (120) having multiple antennae (122, 124). The relay station (120) receives from the source a message containing the data and a first cyclic prefix. It does this using each of its antennae (122, 124), so producing multiple respective received signals. In certain embodiments, the relay station (120) removes the first cyclic prefix from the received signals, replacing it with a new one. In other embodiments, the relay station (120) removes only a portion of the first cyclic prefix. In either case, the relay station (120) may apply space-time coding to generate second signals, which it transmits to the destination (130), which extracts the data. Methods are also proposed for estimating parameters of the channel, to enable the destination (130) to decode the data.

